



State of Utah

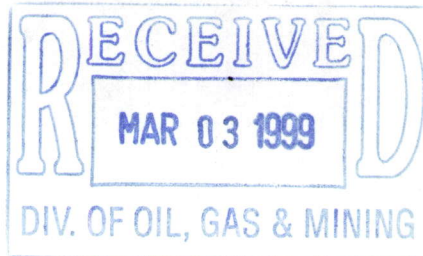
DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER QUALITY

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March 2, 1999

Mr. D.L. Perry
Brush Wellman Inc.
P.O. Box 815
Delta, UT 84624

Dear Mr. Perry:

Subject: Assessment of Potential Impacts to Ground Water Quality, Topaz Beryllium Mine

We have reviewed your report dated February 3, 1999 on potential impacts to ground water quality from activities at Brush Wellman's Topaz Beryllium Mine in Juab County. Samples of ore and waste rock were analyzed using the Meteoric Water Mobility Procedure. The report concluded that some samples of the leachate from these tests were above the ground water standards of the Utah Ground Water Protection Regulations for arsenic, fluoride, gross alpha and radium. The report attributes these exceedances to the extraction procedure needed for fine-grained samples, which the report concludes result in significantly greater leaching than would result from meteoric water infiltrating mine waste dumps and other disturbed areas. There is also no evidence that any of the ore deposit or the overburden is unoxidized, so acid mine drainage should not be a problem at this site.

Background water quality was characterized in the report with samples from two water supply wells, one located in the northern part of the mine area and one four miles southwest. Based on available analyses, both of these wells would have Class II ground water. There is no information on the chemical quality of the ground water which would be first affected by any discharge from the mine workings, but there are no wells or springs where the ground water could be sampled. At this time, there is no reason to suspect that ground water under the mine disturbed area will be of any better quality than that sampled in these wells. The wells were also not sampled for some of the parameters analyzed in the MWMP testing.

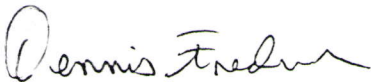
The area of the mine is also in a very dry climate which would tend to minimize leachate formation. Because there is a slight possibility that leachate could have elevated levels of contaminants as compared to background ground water quality, reclamation and revegetation of the disturbed area according to the requirements of other agencies must be done to minimize infiltration of meteoric water and leachate formation. Provided these requirements are followed, we believe that the available information indicates that the mining operation will result in *de minimis* impact to ground water quality, and as such qualifies for ground water permit-by-rule.

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Brush Wellman is still liable for any damage to beneficial uses of ground water that the mining operation may cause. Brush Wellman or any future operators of this minesite must notify the Division of Water Quality if they become aware of any changes in the information which was presented in support of this determination.

Please contact Mark Novak of this office if you have any questions.

Sincerely,



Dennis Frederick, Manager
Ground Water Protection Section

DF:mtn/fb

cc: Tom Munson, DOGM
Central Utah Health Dept.

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FILE:BRUSH WELLMAN BERYLLIUM MINE